

Notice of Allowability

Application No.

10/084,367

Examiner

Toniae M. Thomas

Applicant(s)

NANJO ET AL.

Art Unit

2822

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendmnt filed on 06 August 2004.
2. ☒ The allowed claim(s) is/are 10-13 and 25-28.
3. ☒ The drawings filed on 28 February 2002 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


Mary Wilczewski
Primary Examiner

EXAMINER'S AMENDMENT

Election/Restrictions

1. This application is in condition for allowance except for the presence of claims 1-9 and 14-24 non-elected without traverse. Accordingly, claims 1-9 and 14-24 have been cancelled.

Amendment

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

In Claims

Claim 10, line 10; "begin" has been changed to --being-- after "region" and before "directly".

Claims 1-9 and 14-24 have been cancelled.

Reasons for Allowance

3. The following is an examiner's statement of reasons for allowance: the prior art of record does not anticipate, teach, or suggest a method of manufacturing a semiconductor device comprising the combination of steps substantially as claimed. For example, Tsai discloses a method for forming a semiconductor device, wherein the method comprises: (a) preparing a semiconductor substrate having first and second regions of a first conductivity

type defined by isolation regions in a principal surface area of the semiconductor substrate; forming at least a first gate electrode in a partial area of the first region; implanting impurities of a second conductivity type opposite to the first conductivity type into a surface layer of the second region, and thereafter executing a first activation process to form a first impurity diffusion region shallower than the isolation regions; forming a first spacer film on a side surface of the first gate electrode; by using the first gate electrode and the first spacer film as a mask, implanting impurities of the second conductivity type into a surface layer of the first region, and thereafter executing a second activation process to form a second impurity diffusion region; removing the first spacer film; and by using the gate electrode as a mask, implanting impurities of the second conductivity type into a surface layer in the first region, and thereafter executing a third activation process to form third impurity diffusion region. Whereas Tsai discloses implanting impurities of a second conductivity type opposite to the first conductivity type into a surface layer of the second region, and thereafter executing a first activation process to form a first impurity diffusion region shallower than the isolation regions, Tsai does not teach forming the first impurity diffusion region such that the second region surrounds the first impurity diffusion region, as recited in claim 10. There is no teaching or suggestion within the other prior art of record to modify Tsai such that the second region surrounds the first impurity diffusion region.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

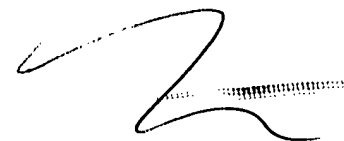
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toniae M. Thomas whose telephone number is (571) 272-1846. The examiner can normally be reached on Monday-Thursday from 8:30 a.m. to 5:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amir Zarabian can be reached on (571) 272-1852. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TMJ

01 November 2001



Mary Wilczewski
Primary Examiner